TOOLS PROJECT

HOME SAFERS GROUP

GROUP MEMBERS:

ROHAN HABU PC 15

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SECURITY SYSTEM

- A security system is basically made to detect the activity going on near the belonging of the user.

- It makes use of many interconnected components that interact with each other and produce some outputs and accordingly alert the user.

- It alerts the surrounding by various ways like sounding alarm, activating some mechanism to lock the intruder at the place, etc.

- Thus by thinking of the security issue nowadays is very sensible and no one compromises on security.
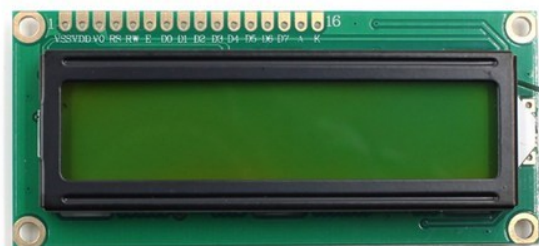
security system has been designed by the point of view of not letting anyone else mises without the administrator's permission.
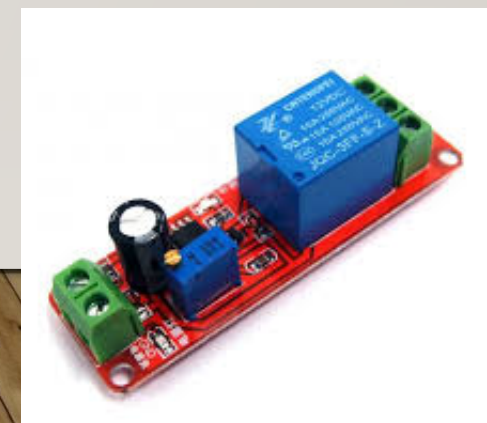
BASIC COMPONENTS

- Sensors.

- Microcontrollers.

- Motors.

- Actuators.
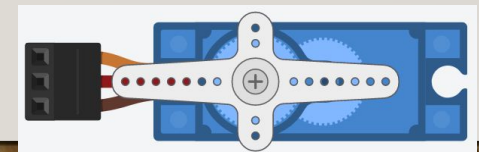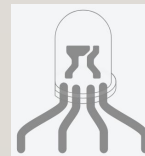
- Displays.

- Buzzers.

- Cameras

SPECIFICATIONS

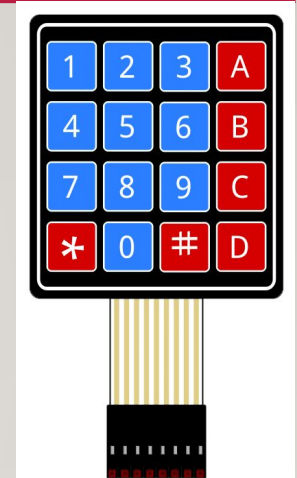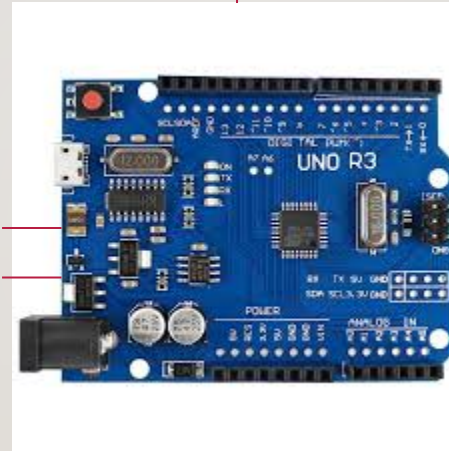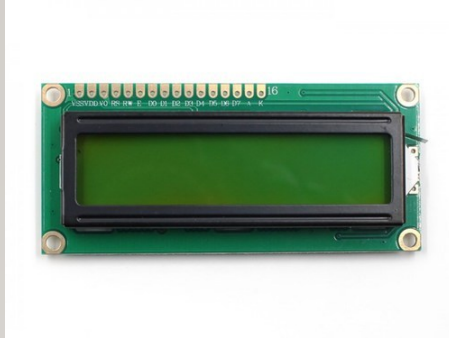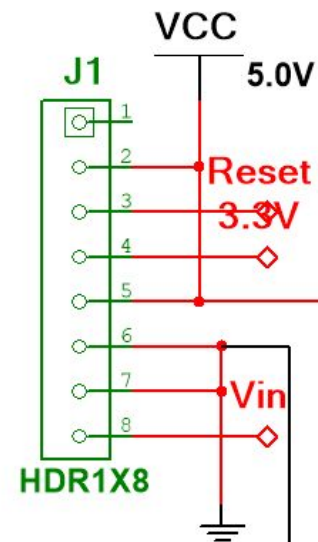- Password verification and validation.

- Alarm or buzzer for user alert.

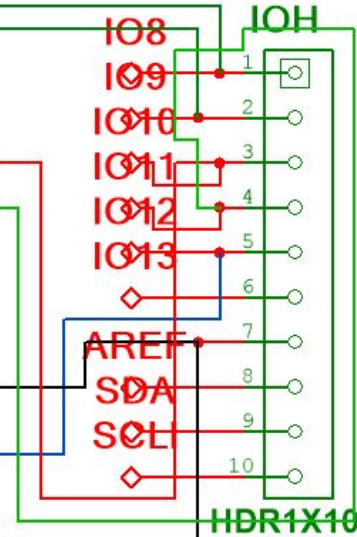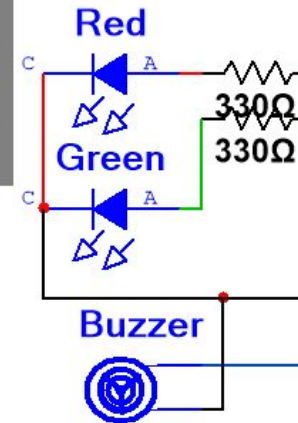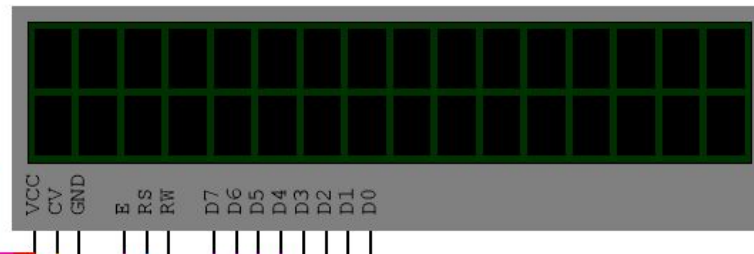- Display and keypad to let the user interact with the system.

BLOCK DIAGRAM
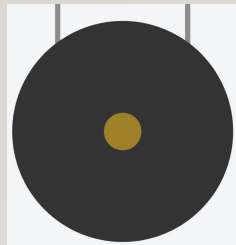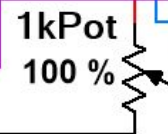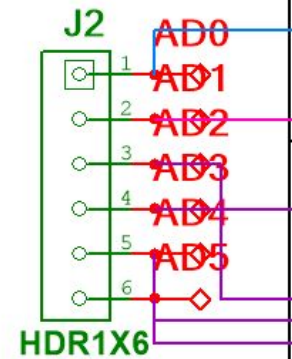
Group members:
Rohan Habu(PC15)
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Abdul Sayyed(PC 25)

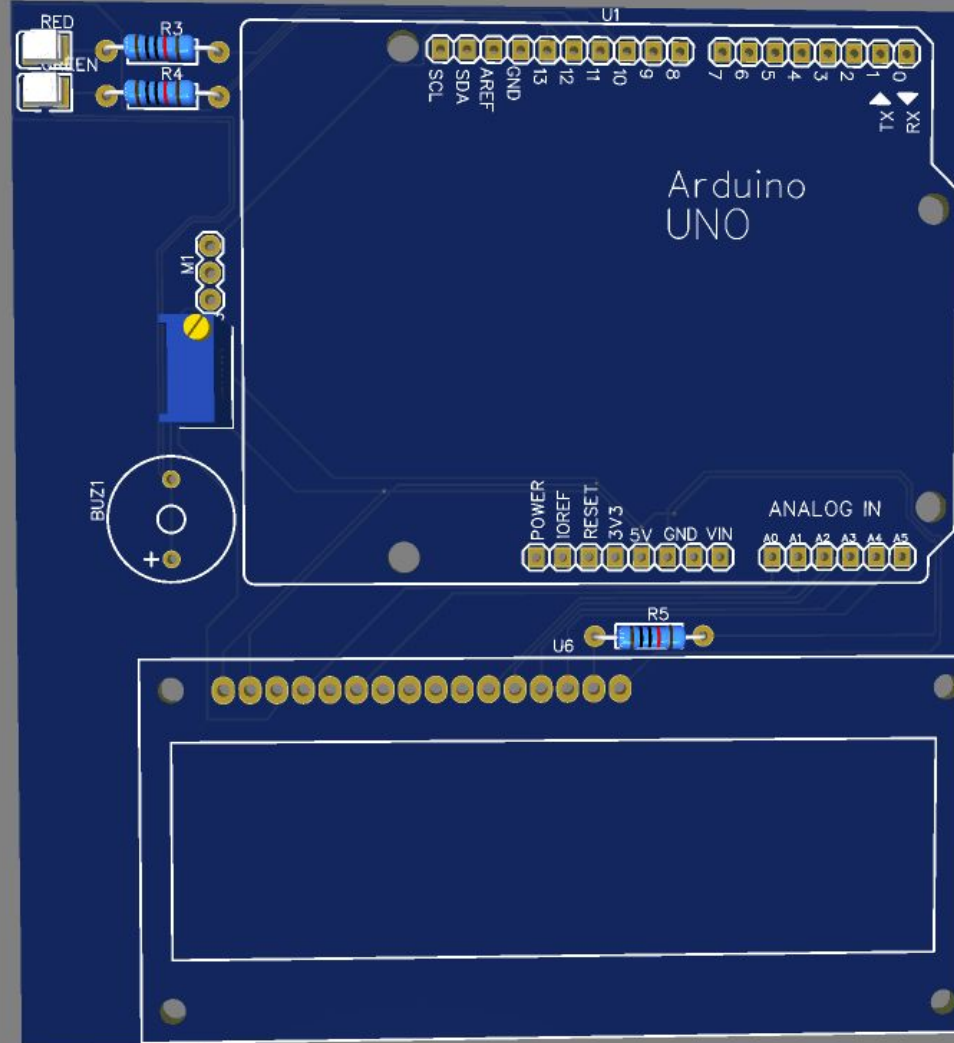Code   Start Simulation   Export   Share
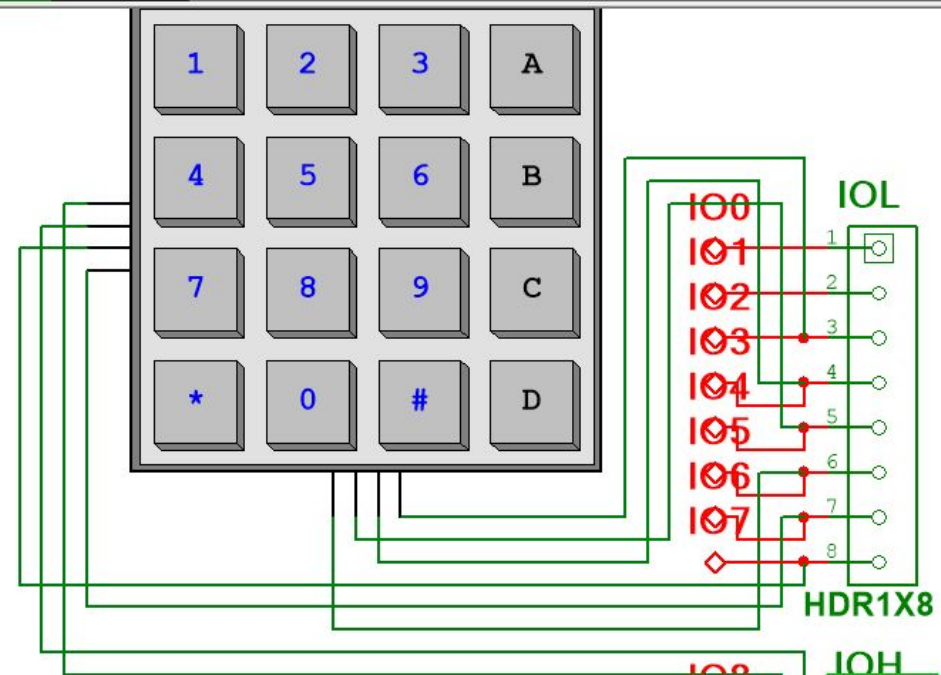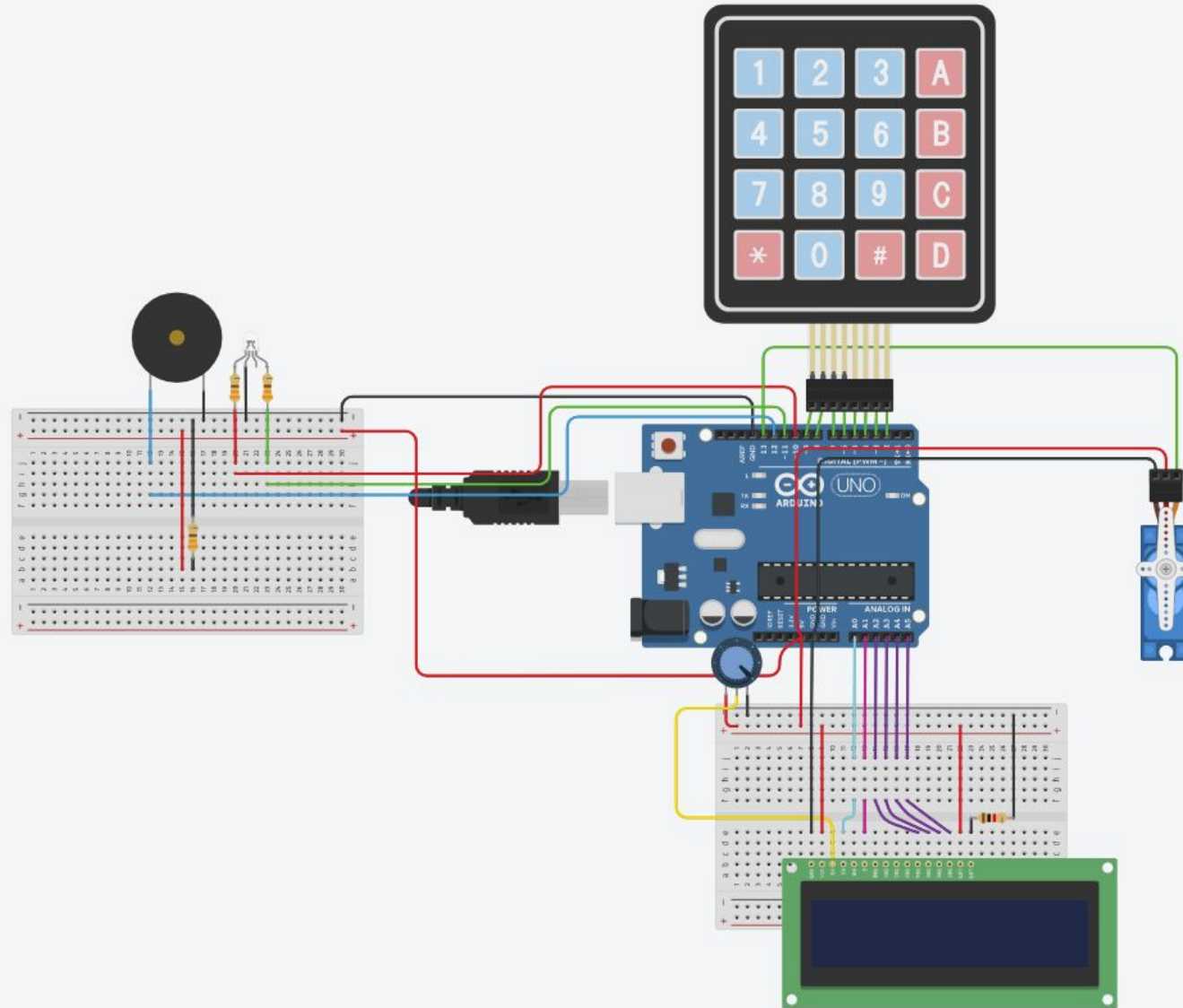
Start   PCB_2021-01-27...   3D View   Photo View

Project

EELib

Library

Parts

JLCPCB

Support

Recycle Bin

RED
GREEN
R3
R4
M1
BUZ1
+
U1
SCL
SDA
AREF
GND
13
12
11
10
9
8
7
6
5
4
3
2
1
0
TX
RX
Arduino
UNO
POWER
IOREF
RESET
3V3
5V
GND
VIN
ANALOG IN
A0
A1
A2
A3
A4
A5
R5
U6

WORKING PRINCIPLE

- This circuit uses an Arduino UNO R3 board in which the password is already defined along with the code.

- Then the input from the user is taken through keypad and then verified with the stored password.

- After checking the user input and the password, accordingly the further action is taken.

- If password is correct, then the door is opened for 5secs to let the user in and again closed to verify the next user entry again.

- If password is wrong then the buzzer is turned on thus, giving an alert to admin someone is trying to enter the place without the permission.
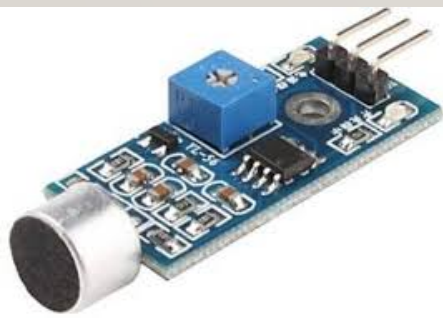
APPLICATIONS

- In building and office lobbies.

- At homes to allow only home members in and out.

- At kitchens of hotels to allows only kitchen staff to enter the kitchen.

- The areas where isolations along with security is needed.

REFERENCES

Arduino.cc

Circuits-lab.com

Electronicsforyou.com

Data sheets

https://components101.com/16x2-lcd-pinout-datasheet

https://components101.com/misc/4x4-keypad-module-pinout-configuration-features-datasheet

THANK YOU